CLAIMS FOR AGGREGATIONS OF ELEMENTS

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Most, if not all, of the previous papers have been submitted quite impersonally on well settled subjects. Any opinion I may express in this is advanced merely as my own, and with the knowledge that others may, and probably do, disagree with some of my conclusions; and my hope is that the paper will lead to a full discussion of all phases of the question.

In the sense of the term common in the practice of the Patent Office, an aggregation is a collocation or an assembly of mechanical elements in which assembly each element performs its own expected function and no more.

Negatively defined, an aggregation is what a combination is *not*. The late Commissioner Butterworth defined a combination as "a cocrdination of individual functions so as to constitute a common function. Coordination necessarily implies some modification of the individual function of each part as it existed prior to the combination." If I may presume, I would modify his definition to this extent, if it is to be applied to apparatus claims. A combination is a joinder of *elements* having individual functions in such a manner as to merge these individual functions into a unitary function. Otherwise, the definition applies only to method claims. Negatively, then, an aggregation is a joinder of elements in which there is no such modification of the individual functions as will produce a common function.

As an example of a good combination, and as a basis for illustration of other points, I submit the following: In a time-piece, in combination, a source of power, a shaft

driven therefrom, an escapement wheel on said shaft, an anchor pivotally mounted to engage said escapement wheel and a pendulum mounted in operative engagement with said anchor.

Of course, this combination is almost as old as the art of horology, but it is still, as it always has been, a good combination in a patentable sense. It long ago ceased to be patentable under the statute, because it long ago ceased to be novel; but there is still that coordination of individual functions of the weight or spring, the wheel-teeth and anchor, and of the pendulum, which produces the common function of sustained synchronism that makes the appartus chronometrically valuable. The motor, through the escapement, maintains the pendulum in oscillation and these oscillations of the pendulum restrain the motor, likewise through the escapement, and accurately measure duration throughout a considerable period, without attention or renewal of the potential energy of the motor.

As an example of a claim for an unquestionable aggregation, let us consider the following:

> "A package or case which, when made with distributing holes and filled, is cemented by the wax or wafer, as set forth."
>
> Sawyer *vs.* Bixby et al., 1 O. G., 165.

> "The distinction between a combination and an aggregation lies in the presence or absence of mutuality of action."
>
> Am. Choc. Machy. Co. *vs.* Helmstetter, 142 F. R., 979.

The main statutory prerequisites to the patentability of a claim are found in Section 4886, R. S., which need not be quoted. Not only must the art, machine, manufacture or composition of matter be new and useful; but it must have been invented or discovered. Discovery usually has to do with arts or compositions of matter; invention, with machines or articles of manufacture. As has already been stated in prior papers, no court has yet attempted to say, unequivocally, what

invention is; but there are scores of particular instances where they have told us what it is not.

There is no mention of aggregations in the statutes, but Section 4888 says that the inventor "shall particularly point out and distinctly claim the . . . combination," which he deems his invention.

What statutory basis, then, has a rejection on the ground that a claim is for an aggregation of elements? It is solely that of lack of invention. In other words, one who has merely juxtaposed a plurality of elements which thereafter perform only the identical functions they performed before the assembling, has not displayed, and did not need to display, any invention.

Decisions supporting this statement may be found by scores, and it would be but a waste of time to cite any considerable number of them; but it may be of interest to trace briefly some of the earlier ones in point of time. One of the first to state the principle from a common sense viewpoint, irrespective of any statutory considerations is the English case Sanders *vs.* Acton, 1 Am. and Eng. Pat. Cases, 469 (1832). The patent before the court was one for improvements in making buttons, and the specification stated that the improvement consisted in the substitution of a flexible material for metal shanks. Neither the construction of the button-body nor the application of a flexible shank was new; but the two were joined by a novel form of collet, which collet, however, was not claimed. Three justices wrote separate but concurring decisions, best expressed, perhaps, by Justice Littledale as follows:

> "Then it comes to this, that neither of them are new inventions, nor is the manner of putting them together new. It seems to me that putting the two together and making it an entire button . . . does not constitute such a new invention as to be the subject of a patent."

The patent was declared void. The decision, of course, does not state in so many words that the button-body and the flexible shank each perform only their separate functions, but the inference that this view was in the mind of each of the justices is, I think, entirely warranted.

The earliest United States decision I have found, bearing on the subject of claims for aggregations, is Ex parte Whitney, MS. Dec. vol. 1, p. 23; July, 1853. Early as it was, no subsequent decision, even of the Supreme Court, has stated the ground of rejection more clearly. In it, Commissioner Charles Mason said:

> "I fully assent to the proposition that a combination of old devices is patentable where a new and useful result is thereby attained, but in such cases something more than the mere assembling together of the several devices and placing them in juxtaposition is requisite. . . .
>
> "It seems to me that the different devices which are here claimed to be combined act wholly independent of each other, and that neither is dependent on any of the others for its utility. If, therefore, there is any meritorious invention, it is for the devices themselves separately and not for a combination. The utility of all is only the *aggregate* of the separate utility of each without receiving any augmentation or modification from the fact of combination. If this be true, there is no doubt of the propriety of refusing a patent."

(The invention was a revolving firearm, and no claim was quoted.)

In discussing the aggregation claim quoted above from the case of Sawyer *vs.* Bixby, Judge Woodruff said:

> "Pepper boxes, etc., are not new and are not claimed to be new. The closing of packages of various forms . . . by . . . paper made to attach itself by the use of . . . adhesive material, is no more new than the other. . . . In combination there is no other effect. . . . The employment of these instrumentalities in putting up packages for transportation is, therefore, *the exercise of judgment in selecting*, not of invention or devising or combining."

These decisions, each published more than forty years ago, set forth as well as could a score of citations,

the statutory ground for rejecting claims for aggregations of elements. Hailes *vs.* VanWormer, 20 Wallace, 353; Reckendorfer *vs.* Faber, 92 U. S., 357; Pickering *vs.* McCulloch, 104 U. S., 318; Thatcher Heating Co. *vs.* Burtis, 121 U. S., 293; Krell Auto Piano Co. of Am. *vs.* Story et al., 207 F. R., 951; are decisions more recent and from higher authority, and therefore more frequently cited; but they add nothing of clearness of statement or positiveness of judicial conviction to the earliest decisions cited above.

There is, however, a class of claims often rejected as aggregations which are, in my opinion, not such and not properly so rejected. Such claims were first discussed, so far as I have had time to trace, in Ex parte Griffith, 85 O. G., 936. In this case, Ex-Assistant Commissioner Greeley, after discussing claims which were undoubted aggregations, continued:

> "A party may invent an improvement on a certain element of an old combination without in any manner changing that combination itself, and in such case he is not entitled to a claim as the inventor of the combination, although it includes the thing which he really has invented. Mere double use of his invention does not give him a right to the combination in which he places it."

This "Griffith Doctrine," if I may so term it, has been rather firmly established by subsequent decisions, such as In re McNeil, 100 O. G., 2178; In re Hawley, 121 O. G., 691; Ex parte Potter, 82 MS. D., 46 (published in part in 17 Gourick); In re Ratican, 162 O. G., 540, and Ex parte Mumford, 206 O. G., 878.

Now it is clear enough from Ex parte Griffith, cited, that the ground of rejection is not lack of invention. It was conceded that invention may appear in the production of an improved element. The ground of rejection of a claim for a combination embodying this novel element was that of lack of novelty of the combination. This is perhaps more clearly stated in In re McNeil, cited.

There is a paragraph in Ex parte Potter, cited, which,

unless considered as a whole, may appear to support the rejection of this type of claim as an aggregation. It is this:

> "Specific features of an element should not be included in claims to combinations of elements where the specific features do not themselves cooperate with the other elements and thus modify and enter into the combination. . . . Where limitations of combination claims to specific features of an element of the combination seems to be necessary in order to distinguish the supposed invention from prior combinations, although the specific features do not cooperate with the other elements, the fact is that *no new combination* has been invented. The novel invention, if there is one, resides in the element itself."

The first sentence of this paragraph seems to imply that unless the elements specifically claimed do not make a novel combination, they do not make any combination; in other words, that the assembly is a mere aggregation. This implication, however, is negatived by the last sentence. That is, no new and, therefore, no patentable combination is formed. The ground of rejection is clearly that of lack of novelty in the combination as a unit and not lack of invention in a collocation of elements which never did and never could cooperate to effect a common function.

So it will be seen that whether a party merely substitutes one old element for another old element in an old combination or whether he substitutes an entirely new and patentable element for an old element in an old combination, he has not produced that novel and patentable unit or entity, a new combination, unless the substituted element, in cooperation with the remaining old elements, brings about some new common function—one not possessed by the combination before the introduction of the new element.

I believe the best way to express the rejection of such a claim is to reject it as an unpatentable combination, because the combination is no longer novel, or to reject it as an old use of applicant's novel element, which element

should be claimed *per se*, as a manufacture, if the prior art warrants it.

Thus, the question of aggregation and the question of novelty are entirely separate ones. It is conceivable that an inventor might actually produce a half dozen entirely novel and patentable manufactures and still be properly denied a claim for all six, if the claim covered the six merely so juxtaposed as to be convenient for successive use, or without being able to perform any common function contributed to by each. If there is no capability of cooperation between the elements assembled, it does not matter in the least how novel they may be, considered as elements, any more than it matters, in a combination, how old they may be individually, if they cooperate perfectly to perform a common function, and thus form a unitary and patentable entity. (Krell Autopiano Co. *vs.* Story & Clark, *ubi supra;* Electric Accumulator *vs.* Julien Electric Co., 38 F. R., 117.)

Nor is it in the least necessary, in rejecting a bald aggregation claim, to cite references showing the elements themselves to be old, although it is much more satisfactory to the applicant, usually, to be shown the old elements. To quote again from Ex parte Potter:

> "Where the applicant contended in effect that rejection on the ground of aggregation can not properly be made except when supported by references showing the devices which are alleged not to cooperate; *Held,* that the contention is error; that the question of aggregation is one of invention and not of novelty."

It is, however, exceedingly difficult in many instances to convince applicants that they should claim the novel element rather than the old combination, or that they are sufficiently protected, in fact better protected, by a claim to the element than by a claim to a combination including it; for a patentee "is entitled to all the benefits of his improvement . . . as fully as if he had foreseen all the uses to which it would be applied" (Ex parte Day, C. D., 1869, 4), unless, perhaps, the use is in an art so remote as to itself involve invention in the adaptation. (Potts *vs.* Creager, C. D., 1895, 143.)

On the other hand, if the inventor patent the combination, his claims therefor are void for want of novelty, although he may believe that he invented a new combination as well as a new element. (Langan *vs.* Warren Axe & Tool Co., 166 O. G., 986.) In fact, he may have actually invented the entire combination; may never have seen or known of such a combination prior to his disclosure of it; but that does not make it any the less unpatentable for want of novelty. He is in no worse position than another inventor who has expended time, labor and money to reinvent something which proves to be old *in toto*. It is in all respects, then, preferable for him to relinquish all that is old and to claim in the broadest manner possible that which proves to be actually novel.

There is one more point to be considered. It is held by some that although both a combination and many of the elements thereof are novel, specific features of the elements should not be included in claims to such combinations where the specific features do not themselves cooperate with the other elements to modify the combination. To express this more briefly, they hold that there may be a combination broadly where there is no combination specifically; which is equivalent to saying that a collocation of elements may be a good and patentable combination when claimed broadly and an aggregation when claimed specifically. This seems to me to run counter not only to the statutory ground of rejection of an aggregation, but to a number of authorities and decisions, as well. For instance, in conceiving and embodying in practical form a new and useful invention, an inventor will devise, modify and adapt elements to fit them into a combination, also new, which shall disclose "the best mode in which he has contemplated applying the principle" underlying his invention, as required by the statute (Section 4888). To hold that in claiming his new combination he may not also simultaneously claim his new elements as specifically as he chooses is, first of all, to deny him the right to "particularly point out and distinctly claim," as required by the same section. Furthermore, the elements broadly claimed, cooperate in some way to effect a common function;

specifically claimed, they still effect a common function, the same one, and a novel one; and, lastly, if it required invention to conceive and produce the broad combination, it required so much the more invention to produce the concrete, specific assembly which embodies "the best mode . . . of applying the principle" utilized.

To illustrate, let us revert to the claim for a time-piece, suggested at the beginning of the paper; and let us suppose that the inventor had first experimented with pendulums and had devised a mercury pendulum which was practically synchronous for all temperatures. Let us also suppose that he was the first to devise a spiral-spring motor. Is it logical, after having allowed him the broader claim quoted to deny him one like the following: In a time-piece, in combination, a spiral spring, a shaft driven therefrom, an escapement wheel on said shaft, an anchor pivotally mounted to engage said escapement wheel, and a pendulum having a bob comprising a receptacle containing an elongated column of mercury, said pendulum being mounted in operative engagement with said anchor. I think not, for the latter claim sets forth a novel combination as much as the other, and one which it required invention to produce. In short, it meets all the prerequisites of Section 4886 quite as well as the broader claim. The inventor says, in effect: Here is the actual, physical embodiment of my conception in the best mode in which I have contemplated applying it; having complied fully with the statute, you can not deny my right to claim it as specifically as I choose.

Walker says:

> "It is a proper practice to make a generic claim and also a specific claim, in an application for a patent on a generic invention, even where only one species is described in the specification. In such a case, if the inventor's understanding that his invention is primary turns out to be true, both claims will be valid. But, if some invention is afterward discovered in the prior art, which relegates the patent to a secondary place, the specific claim may stand and be valid, though the generic claim is too broad to be maintained." (Walker on Patents, 4th Ed., sec. 116.)

Ex parte Eagle, C. D., 1870, 137, the office standby on requirements of division, says:

> "An applicant may fairly describe several species of a genus and may make any claim that is generic in its character and includes them all. In addition to this, . . . he may select one of the embodiments of his invention for specific claims."
>
> See, also Ex parte Ewart, C. D., 1880, 78, and Ex parte Cook, C. D., 1890, 81.

Neither Walker nor any of the decisions just cited puts any limit upon the inventor. He may claim his preferred embodiment just as specifically as he chooses, provided always that he does not file what the courts have styled "a multitude of fuliginous and attenuated claims," which do not differ patentably from each other.

As recently as 1913, the Circuit Court of Appeals for the Sixth Circuit outlined this right to specific claims to the following extent:

> "Each claim should be directed at some function, step, or advantage to give it individuality; it should have a characterizing thought or point by which it can be identified; and, if the court which is to construe the claim can find this dominant thought, its task will be simplified. We may make this concrete by supposing that elements A, B, and C are each old in several specific forms, but are operative only in the combination A, B, C. An inventor perfects new and useful specific forms of each, a, b, c. The most desirable form of his invention is the combination a, b, c, and this the inventor considers his perfect work; but he may use and is entitled to monopolize one or two of the old forms in combination with two or one of his new forms. He may have, and the proper drafting of his patent will secure for him, a series of combination claims like this (capitals representing generic; lower case, his new specific forms): (1) a, b, c; (2) a, b, C, (3) a, B, C, (5) A, b, c, (6) A, B, c, (7) A, b, C."
>
> Scaife & Sons Co. *vs.* Falls City Woolen Mills, 209 F. R., 210.

In a still more recent decision, the Honorable First Assistant Commissioner held:

> "A claim for a machine for wax-treating parts of boots and shoes including a wax applying wheel provided with 'a working face of combustible fabric' is not an aggregation because limited to a 'combustible' fabric, the claim otherwise setting up a good combination."
>
> Ex parte Pease, 202 O. G., 631.

Note the "otherwise" in this citation. The trend of Walker and all these decisions is that a claim for an assembly of elements which is a good combination when broadly stated does not become an aggregation (that is, does not cease to embody invention), even when it is claimed as specifically as possible. With this view, it appears to me that the statute and the entire line of decisions are harmonious.

SUMMARY.

An aggregation is an assembly of elements which are incapable of coacting to produce a common function and which assembly, therefore, exhibits no invention.

Some claims which are often rejected as aggregations are, in reality, for good combinations which are no longer novel. They may contain novel elements, but the combination, which is the entity considered by the statute, is no longer patentable. The novel element or elements should be made the subject-matter of the claims.

If a combination is new and patentable if claimed broadly, it does not become an aggregation by embodying specific limitations of the elements making up the combination.

Read January 14, 1915.